MULTIMEDIA UNIVERSITY ®

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 3, 2015/2016

PCA0150 – COMPUTER APPLICATIONS

(Foundation in Information Technology/ Foundation in Life Sciences)

31 MAY 2016
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENT

1. This question paper consists of **THREE** pages (excluding the cover page).
2. Answer **FIVE** out of **SIX** questions. Marks will be given for the first five questions answered.
3. Write your answers in the Answer Booklet.

Instructions: Answer **FIVE** questions only. Write your answers in the Answer Booklet.

QUESTION 1 [10 Marks]

Jimmy likes to play online games such as Warcraft II using his computer at home. This game allows him to play with other players all over the world via the Internet. He needs to use his keyboard and mouse as the input devices for the game.

a. What is input device? List **TWO (2)** examples of input devices that can be used as game controllers.

(2 marks)

b. Recommend **ONE (1)** option of keyboard that can be used by Jimmy specifically to play game on the computer. What is the benefit of using this keyboard?

(2 marks)

c. Suggest and explain briefly the suitable network architecture for an online game. Draw the architecture to support your answer.

(3 marks)

d. Gameplay and user interface are the main attractions of a computer game. Name and briefly explain the suitable type of graphics to be used as the game's user interfaces. Give a reason to support your answer.

(3 marks)

QUESTION 2 [10 Marks]

Soraya plans to implement a queue management system for her clinic. This system will produce a ticket that shows patient's waiting list and room for treatment. The ticket will be printed using a kiosk before the registration process while all the information will be displayed using Liquid Crystal Display (LCD) screen at the waiting area.

a. Why Soraya wants to use Liquid Crystal Display (LCD) screen?

(1 mark)

b. Suggest the most suitable printer to be installed at the kiosk to print the tickets. Give **TWO (2)** reasons to support your answer.

(3 marks)

c. Suraya and IT Company Sdn Bhd. are in the process of designing the system. List and explain briefly **TWO (2)** control structures used in design stage of a Program Development Life Cycle (PDLC).

(3 marks)

Continued...

d. After a discussion, Suraya decided to include a system to store all required personal information of her patients into a database. List **THREE (3)** advantages of implementing the database approach.

(3 marks)

QUESTION 3 [10 Marks]

Steven wants to buy a personal computer (PC) for his personal usage. His main concern is on the processor capability. Lots of computer nowadays offered multi-core processor.

a. What is multi-core processor? Identify **TWO (2)** advantages of using multi-core processor.

(3 marks)

b. Steven is still considering whether to use a free software such as FreeDOS or purchase a proprietary software for the operating system (OS) of his computer.

i. What is the importance of an operating system?

(1 mark)

ii. List **FOUR** (4) functions of an operating system.

(2 marks)

iii. Suggest and briefly explain the most suitable category of operating system for Steven's consideration. Provide **ONE (1)** example of the operating system to support your answer.

(2 marks)

c. Steven has registered for a short course that offers a computer-based training to learn new technologies in programming. What is computer-based training? Give **ONE (1)** benefit of this training method.

(2 marks)

QUESTION 4 [10 Marks]

Zama is assigned to develop an online shopping system for Zynn Couture. This system will allow users to view catalogue, purchase products and make payment using their bank card or credit card.

a. This system is one example of computer communications. What is computer communication? List **FOUR (4)** components required in computer communication.

(3 marks)

b. Zama wants to introduce cloud storage to Zynn Couture. Help him to identify **THREE (3)** reasons for his client to use cloud storage.

(3 marks)

Continued...

c. This system will consist of a database to store all business transactions. One of the main table is used to store their product's details as below.

Primary key	product_name	product_category	cost_price	retail_price	colour
00001	basic silky	Shawl	45.00	58.00	beige

i. Suggest a suitable name for the primary key and the table above.

(1 mark)

ii. Identify the data type for each field of the table above.

(3 marks)

QUESTION 5 [10 Marks]

Nowadays, ethical hackers play an important role in every organization due to the rapid usage of the Internet and its Web applications. User can easily download any files and applications from the Internet and use them in their computers either for free or with fees.

a. Some programmers create the applications using procedural language such as C. What is procedural language? List and briefly explain **TWO (2)** methods used to convert it into machine language.

(4 marks)

b. Write **TWO (2)** advantages of using the Internet other than downloading files and applications.

(2 marks)

c. Explain briefly the difference between Ethical Hacker, Hacker and Cracker. Identify **TWO (2)** categories of Hacker.

(4 marks)

QUESTION 6 [10 Marks]

Computer addiction is a serious problem in our community due to the growth of computer technology. Young people are mostly involved as they use it mainly for communication.

a. What is computer addiction? Identify **THREE (3)** symptoms of this problem.

(4 marks)

b. Suggest and briefly describe **TWO (2)** application software used for communication.

(3 marks)

c. Every computer will perform machine cycle to ensure that all applications installed are working efficiently. List and briefly describe **TWO (2)** processes of machine cycle in the control unit of a processor.

(3 marks)

End of Paper